

USES OF DNA-PK

Abstract of the Invention

This invention provides a method for increasing the susceptibility of a cell to DNA-damaging agents, comprising introducing into the cell an antisense oligonucleotide that specifically hybridizes to a nucleic acid encoding a DNA dependent protein kinase subunit so as to prevent expression of the DNA dependent protein kinase subunit; wherein the antisense oligonucleotide is in an amount sufficient to increase the sensitivity of the cell to heat, chemical, or radiation-induced DNA damage; and wherein the DNA dependent protein kinase subunit is a DNA dependent protein kinase catalytic subunit, a Ku70, or a Ku80. This invention also provides a method of treating a tumor in a subject, comprising administering to the subject an antisense oligonucleotide that specifically hybridizes to a nucleic acid encoding a DNA dependent protein kinase subunit so as to prevent expression of the DNA dependent protein kinase subunit; wherein the antisense oligonucleotide is in an amount sufficient to increase the sensitivity of the tumor to heat, chemical or radiation-induced DNA damage; and wherein the DNA dependent protein kinase subunit is a DNA dependent protein kinase catalytic subunit, a Ku70, or a Ku80. This invention provides an antisense oligonucleotide that specifically hybridizes to a nucleic acid encoding a DNA dependent protein kinase subunit, wherein the DNA dependent protein kinase subunit is a DNA dependent protein kinase catalytic subunit, Ku70, or Ku80, so as to prevent expression of the DNA dependent protein kinase subunit.